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| EXAMINER | |
|---|---|
| BATES, KEVIN T | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/650,561 | UZUN ET AL. | |
| | Examiner | Art Unit | |
| | KEVIN BATES | 2153 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *67-127* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *67-127* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## *Response to Amendment*

This Office Action is in response to a communication made on April 28, 2008.

Claims 1-66 have been cancelled.

Claim 127 has been newly added.

Claims 67 – 127 are pending in this application.

## *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 101-126 are rejected under 35 U.S.C. 101** because the claimed invention is directed to non-statutory subject matter.

Claim 101 recites an apparatus comprising various means of performing process steps. Paragraph 72 of the specification discloses that the invention can be performed as software code, this shows that the apparatus is software per se.

Claim 110 recites a program stored on a computer readable medium. Paragraph 72 of the specification discloses that a computer readable medium includes a communication medium. Communication mediums are not statutory subject matter.

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 67 – 127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knightly (2003/0163593) in view of Lahat (6201792), and in further view of Takeuchi (7269662).**

**Regarding claims 67, 101, and 110**, Knightly teaches a method comprising:

providing a queue corresponding to a first media access control (MAC) device to which data is to be transmitted over a network (Paragraph 48);

receiving data, from a local client, destined for a client of a first MAC device of the plurality of MAC devices (Paragraph 48);

storing at least a portion of the data in a first queue corresponding to the first MAC device (Paragraph 48);

receiving information indicating a need to change an amount of data being transmitted to the client of the first MAC device (Paragraph 47); and

selectively transmitting data stored in the first queue to the first MAC device and the client of the first MAC device; wherein a rate at which the selectively transmitting is performed is based at least in part on at least a portion of the information indicating the need to change the amount of data being transmitted to the client of the first MAC device (Paragraph 48).

Knightly does not explicitly indicate that the MAC device does not have a queue for each of a plurality of media access control devices or <u>that the client of the first MAC device generates the request to change the amount of data being generated</u>.

Lahat teaches a system of having a solution for signaling pervious devices to throttle their communications that includes having output queues for each of the destination devices (Column 5, lines 26 – 43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include Lahat's output queues in Knightly's system in order to help ensure all the destination devices are receiving fair weight when scheduling output packets along the network by using the queues per destination device.

Takeuchi teaches a system for reducing the amount of information is transmitted to a client based on a client generated request (Column 1, lines 34 - 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Takeuchi's teaching of allow the client reduce the amount of data it is receiving before a local buffer overflows.

**Regarding claim 85**, Knightly teaches an apparatus comprising:

a first media access control (MAC) device operable to be coupled to a network (Paragraph 7);

a buffer coupled to the first MAC device and operable to receive data from the first MAC device (Paragraph 46);

a packet processor coupled to the buffer (Paragraph 46);

a first plurality of queues, wherein each of the first plurality of queues corresponds to a respective network station (Paragraph 48); and

at least one shaper circuit, the at least one shaper circuit being configured to dequeue data stored in at least one of the first plurality of queues based at least in part

on at least a portion of information indicating a need to change an amount of data being transmitted to the respective network station corresponding to the at least one of the first plurality of queues (Paragraph 47-48).

Knightly does not explicitly indicate that the client of the first MAC device generates the request to change the amount of data being generated.

Takeuchi teaches a system for reducing the amount of information is transmitted to a client based on a client generated request (Column 1, lines 34 - 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Takeuchi's teaching of allow the client reduce the amount of data it is receiving before a local buffer overflows.

**Regarding claims 68, 102, 105, and 111**, Knightly teaches the method of claims 67, 101, and 110 further comprising: providing a second queue corresponding to the first MAC device to which data is to be transmitted over the network (Paragraph 48); storing at least another portion of the data destined for the at least one of the first MAC device and the client of the first MAC device in the second queue (Paragraph 48); and selectively transmitting data stored in the second queue to the at least one of the first MAC device and the client of the first MAC device (Paragraph 48); wherein a rate at which the selectively transmitting of data stored in the second queue is performed is based at least in part on one of: the at least a portion of the information indicating the need to change the amount of data being transmitted to the at least one of the first MAC device and the client of the first MAC device; and at least another portion of the information indicating the need to change the amount of data being transmitted to the at

least one of the first MAC device and the client of the first MAC device (Paragraph 47-48).

**Regarding claims 69, 92, 103, and 112**, Knightly teaches the method of claims 68, 85, 102, and 111 wherein the first queue is for data having a first priority level, and wherein the second queue is for data having a second priority level (Paragraph 48).

**Regarding claims 70, 93, and 113**, Knightly teaches the method of claims 67, 92, and 110 further comprising: providing a second queue corresponding to a second MAC device to which data is to be transmitted over the network (Paragraph 48); receiving data destined for at least one of the second MAC device and a client of the second MAC device (Paragraph 48); storing at least a portion of the data destined for the at least one of the second MAC device and the client of the second MAC device in the second queue (Paragraph 48, wherein traffic from the second MAC device that is classified as B and C class are placed in the second queue); and selectively transmitting data stored in the second queue to the at least one of the second MAC device and the client of the second MAC device; wherein a rate at which the selectively transmitting of data stored in the second queue is performed is based at least in part on information indicating a need to change an amount of data being transmitted to the at least one of the second MAC device and the client of the second MAC device (Paragraph 47-48).

**Regarding claims 71 and 114**, Knightly teaches the method of claims 67 and 110 wherein the first queue is provided in a memory coupled to at least one of another MAC device and a client of the another MAC device (Paragraph 48).

**Regarding claims 72, 96, and 115**, Knightly teaches the method of claims 67, 85, and 110 wherein the first queue is provided one of a memory of a second MAC device and a client of the a memory of a second MAC device (Paragraph 48, wherein each MAC device in the network has a first queue).

**Regarding claims 74 and 117**, Knightly teaches the method of claims 67 and 110 wherein the information indicating a need to change the amount of data being transmitted to the at least one of the first MAC device and the client of the first MAC device is received from at least one of the first MAC device, the client of the first MAC device, another MAC device, and a client of the another MAC device (Paragraph 160 and 163).

**Regarding claims 75 and 118**, Knightly teaches the method of claims 67 and 110 wherein the selectively transmitting data stored in the first queue further comprises selectively transmitting data stored in the first queue in one of a first egress direction and a second egress direction (Paragraph 48).

**Regarding claims 76, 98, and 119**, Knightly teaches the method of claims 67, 85, and 110 further comprising: receiving information indicating a need to change an amount of data being transmitted on a first network link between the first MAC device and another MAC device; selectively transmitting data being selectively transmitted to the at least one of the first MAC device and the client of the first MAC device; wherein another rate at which the selectively transmitting of data being selectively transmitted is performed is based at least in part on at least a portion of the information indicating the

need to change the amount of data being transmitted on the first network link (Paragraph 47 and 166).

**Regarding claims 79 and 122**, Knightly teaches the method of claims 67 and 110 further comprising: transmitting information indicating a need to change an amount of data being transmitted to at least one of another MAC device and a client of the another MAC device (Paragraph 47).

**Regarding claims 80, 87, 108, and 123**, Knightly teaches the method of claims 79, 85, 101, and 122 further comprising: determining an extent to which a data buffer associated with the client of the another MAC device contains data; and preparing the information indicating the need to change the amount of data being transmitted to the at least one of the another MAC device and the client of the another MAC device (Paragraph 160 and 166).

**Regarding claims 73, 77, 89, 95, 99, 104, 106, 116, and 120**, Knightly teaches the method of claims 67, 76, 87, 98, 101, 105, and 110 wherein the information indicating a need to change the amount of data being transmitted to the at least one of the first MAC device and the client of the first MAC device includes at least one of: a MAC device address, a data transmission rate, a ramp factor, a threshold value, a network link bandwidth value, and a flag (Paragarph 160 and 163, a data transmission rate).

**Regarding claims 78, 88, 90, 107, and 121**, Knightly teaches the method of claims 67, 85, 87, 101, and 110 further comprising: receiving information indicating a need to change an amount of data being transmitted on a first network link between the

first MAC device and another MAC device, wherein the rate at which the selectively transmitting is performed is further based at least in part on at least a portion of the information indicating the need to change the amount of data being transmitted on the first network link (Paragarph 47, 160, and 163).

**Regarding claims 81, 86, and 124**, Knightly teaches the method of claims 67, 85, and 110 wherein the network is at least one of a metropolitan area network (MAN) and a resilient packet ring (RPR) network (Paragraph 7).

**Regarding claims 82, 91, and 125**, Knightly teaches the method of claims 67, 85, and 110 wherein the information indicating a need to change an amount of data being transmitted to the at least one of the first MAC device and the client of the first MAC device is received in a resilient packet ring (RPR) fairness message (Paragraph 10).

**Regarding claims 83 and 97**, Knightly teaches the method of claim 67 encoded in a computer readable medium as instructions executable on a processor, the computer readable medium being one of an electronic storage medium, a magnetic storage medium, and an optical storage medium (Paragraph 46, wherein the processor carries out the algorithm).

**Regarding claims 84, 100, 109, and 126**, Knightly teaches the method of claims 67, 85, 101, and 110 wherein the information indicating the need to change the amount of data being transmitted to the at least one of the first MAC device and the client of the first MAC device further comprises at least one of: information indicating the need to

reduce the amount of data being transmitted, and information indicating the need to increase the amount of data being transmitted (Paragraph 67).

**Regarding claim 88**, Knightly teaches the apparatus of claim 87 wherein at least one of the first MAC device, the buffer, the packet processor, the at least one shaper circuit, and the comparison circuit is further configured to prepare a message including information indicating a need to change an amount of data being transmitted to a network station that includes the first MAC device (Paragraph 47).

**Regarding claim 94**, Knightly teaches the apparatus of claim 93 wherein the at least a portion of the information indicating the need to change the amount of data being transmitted to the respective network station corresponding to the at least one of the second plurality of queues is the same as the at least a portion of the information indicating the need to change the amount of data being transmitted to the respective network station corresponding to the at least one of the first plurality of queues (Paragraph 48).

**Regarding claim 127**, Knightly teaches the method of claim 67, wherein the local client is a device or entity that invokes the service interface of a MAC device (Figure 3, where the MAC device is the RPR node and the client is sending traffic or service), and the local client is associated with a station in a ring network (Paragraph 7).

### *Response to Arguments*

Applicant's arguments filed April 28, 2008 have been fully considered but they are not persuasive.

The applicant argues that the references Knightly and Lahat are not combinable. The examiner disagrees, the applicant directs his arguments at the differences between the Knightly and Lahat system, but the examiner is only relying on the queuing disclosure in Lahat and there is no indication that those multiple queues would not be operable when used to improve the Knightly system.

The applicant argues that Knightly teaches away from using queues per destination as claimed. The examiner disagrees, while Knightly teaches a preferred embodiment of the disclosure regarding a simplified amount of hardware, there is no indication that Knightly cannot support the queuing system of Lahat. Lahat discloses an embodiment of a backpressure system where queues are used per destination, while this may require more hardware elements that Knightly has preferred, the combination provides other benefits such as fairer access to network resources for each destination node.

Finally, the applicant argues that the reference Takeuchi does not disclose a local client requesting service from a MAC device. The examiner is not relying upon the Takeuchi reference for the MAC device in the network, Takeuchi only teaches an improvement to a network system where a client requests the network to provide his connection with a predetermined about of resources. Knightly teaches a network with MAC devices providing network connection services in a ring network with a local client (¶ 6-7 and 46).

## ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN BATES whose telephone number is (571)272-3980. The examiner can normally be reached on 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Bates/
Primary Examiner, Art Unit 2153